United Nations A/AC.105/PV.415

General Assembly

Official Records

Committee on the Peaceful Uses of Outer Space

415th Meeting
Tuesday, 20 June 1995, 3 p.m.
Vienna

Chairman: Dr. P. Hohenfellner . . . . . (Austria)

The meeting was called to order at 3.15 p.m.

Report of the Legal Subcommittee on the work of its thirty-fourth session (A/AC.105/607) *(continued)*

Mr. Curia (Argentina) (*interpretation from Spanish*): My delegation would like to refer briefly to the work carried out by the Legal Subcommittee at its thirty-fourth session.

I should like to begin by acknowledging the work done by the Subcommittee's Chairman, Mr. Vaclav Mikulka, and thanking him.

With regard to the item on nuclear power sources, we believe that the decision which was adopted on that item was wise and at the same time realistic. It is an illustration of the outcome of the intelligent application of flexibility.

The work carried out on the item on the definition and delimitation of outer space has led to qualitative progress with the approval of the famous questionnaire. My delegation considers that the consensus achieved through the efforts of various delegations should translate into appropriate responses to and comments on this questionnaire. This would enable the Subcommittee to make some progress in its consideration of the item. In this sense, my delegation supports the approval of the questionnaire and its timely submission to States.

The discussion on the item on the geostationary orbit was reasonable and wide-ranging. We await with a good deal of interest the new paper to be submitted by Colombia at the next session of the Subcommittee. We are sure that this document will inject new ideas and approaches which, in turn, will enable us to make progress in our work.

With regard to the item on the legal aspects related to the application of the principle that the exploration and utilization of outer space should be carried out for the benefit and in the interests of all States, taking into particular account the needs of developing countries, my delegation considers that the new paper submitted by France and Germany, by approaching the subject from a different angle, will enrich the debate. On the other hand, we believe that the unofficial paper produced by the Chairman of the Working Group could serve as a guide for the work in 1996.

My delegation considers that the deliberations on the working methods and agenda of the Legal Subcommittee have been fruitful. In this sense, we believe that many ideas and trends have emerged, and we express our decisive support for the measures aimed at strengthening the efficiency and the effectiveness of the Subcommittee's work.

Mr. González (Chile) (*interpretation from Spanish*): I should like to begin by stating for the record my delegation's surprise at hearing this morning that the Legal Subcommittee's session was a matter of embarrassment for the United Nations. We should like, frankly, specifically and in the most categoric way possible, to reject this assertion.

We consider this an affront to the representatives who went to that session to work. In addition, it is not in

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keeping with the atmosphere that has always prevailed in this Committee and its subsidiary bodies.

I would now like to mention briefly some of the central aspects that in my opinion constituted the cardinal points before the last session of the Legal Subcommittee and that are set forth in its report. If one reads the report with a certain degree of seriousness and even a minimum of attention, without being distracted by activities that I would call extracurricular, one can see that the document shows that progress has been made on all of the issues it deals with. My colleague and friend the representative of Argentina has just mentioned the progress achieved, for example, on the item on delimitation, a subject on which, as the Committee knows, progress had been blocked almost from the start. For the first time — and this is why I pay tribute to the representative of Argentina, Chairman of the Working Group — there has been a major opening thanks to the introduction of a questionnaire that will certainly make it possible to establish at least some legal elements so that work can progress in some direction. At least we now have some direction in this regard.

Moreover, we cannot overlook the tremendous efforts made by the delegation of Colombia in submitting the working paper on the geostationary orbit. We are not entirely in agreement with that document — there are paragraphs about which we have serious doubts — but we value the serious and responsible effort to provide a legal framework for a resource that must necessarily be regulated so that all countries can have real and equitable access to it.

I turn now to agenda item 5. It must be stressed that this item, as it was conceived and given its title, constitutes a revised version of article I of the outer space Treaty, because the idea that the exploration and utilization of outer space should be carried out taking into particular account the needs of developing countries has been added. In a way, such ideas are already established in article I of the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies. That Treaty states in its preamble:

> "*Believing* that such cooperation will contribute to the development of mutual understanding ..." (*General Assembly resolution 2222 (XXI), annex, fifth preambular paragraph*)

and

> "*Believing* that the exploration and use of outer space should be carried on for the benefit of all peoples irrespective of the degree of their economic or scientific development". (*ibid., third preambular paragraph*)

This, by the way, when the Treaty was being adopted, was an amendment submitted by the delegation of Brazil.

What am I trying to highlight in saying all this? First of all, it is necessary to move towards the consideration and development of a legal frame of reference for international cooperation — which is what we were trying to do with document A/AC.105/L.182/Rev.2, the paper contributed by France and Germany and, finally, the summary of the informal paper submitted by the Chairman.

The subject of international cooperation appears repeatedly in many international treaties. The definition of its legal status has even been discussed, and some treaty experts believe that this subject should be granted the character of *jus cogens* on an international level. I do not wish to get into details of doctrine on this matter, but it is obvious that the outer space Treaty makes a sharp distinction between international understanding, which is practically a given, and international cooperation, where one assumes that there should be equality of parties. In article III, for example, it says that States

> "should carry on activities in the exploration and use of outer space ... in accordance with international law, including the Charter of the United Nations, in the interest of maintaining international peace and security and promoting international cooperation and understanding." (*ibid., article III*)

Now, how can we articulate this equality of parties in an aspect of international relations where, because of the very nature of the technology gap, no such equality exists? This can be done by establishing or adding the concept of equity, which has been so irritating and nettlesome to some delegations that have not considered that equity is a widely accepted principle of international law, contained in many major international treaties, such as the Convention on the Law of the Sea, and in article 38 of the Statute of the International Court of Justice, which states that rulings can be handed down in some cases *ex aequo et bono* — on the basis of equity.

In this area, equity simply means making equality truly effective. It means trying to establish unequal treatment for countries that are not equal. It can be shown objectively and empirically that in the field of space there is an inequality between countries that must be redressed through law, especially when we consider that the conceptual frame of reference of space law is that it is the common heritage of mankind. We need only look at the beginning of the first sentence of the first paragraph of article I of the outer space Treaty, which states,

> "The exploration and use of outer space ... shall be carried out for the benefit and in the interest of all countries," — without distinction — "irrespective of their degree of economic or scientific development, and shall be the province of all mankind" (*ibid., article I*)

This makes it obvious that, within the format and framework of the Working Group's consideration of agenda item 5, work must be done to come up with the most effective and appropriate way to make it possible to implement the applications of space technology for the benefit of all mankind, without disregarding the rights of intellectual or industrial property and industrial property of the countries that are the main possessors of this technology.

It is also a question of trying to give very clear expression to the seven principles identified in General Assembly resolution 2625 (XXV), entitled "Declaration on Principles of International Law concerning Friendly Relations and Cooperation among States in accordance with the Charter of the United Nations". It so happens that this Declaration, which was conceived at the time of its adoption as a Declaration containing some of the solemn principles of *jus cogens*, refers in one of its preambular paragraphs only to certain specific subjects — in this case, space. It states:

> "*Recalling* the established principle that outer space, including the Moon and other celestial bodies, is not subject to national appropriation by claim of sovereignty, by means of use or occupation, or by any other means, and mindful of the fact that consideration is being given in the United Nations to the question of establishing other appropriate provisions similarly inspired". (*General Assembly resolution 2625 (XXV), seventh preambular paragraph*)

Obviously, this paragraph must be interpreted to mean that it is necessary to move ahead towards the establishment of a framework of cooperation that is consistent with the general principles of international law I have cited, the seven principles established in General Assembly resolution 2625 (XXV) and the provisions of articles I and III of the 1967 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies.

We would also like to state that given the new concept of international security — where it is becoming clearer every day that threats are no longer from military sources but from non-military sources such as the deterioration of the environment, drug trafficking and terrorism, and others — the threats can be confronted more effectively if space technology is used as an element of preventive diplomacy, as has recently been mentioned in the basic documents submitted by the Secretary-General.

One of the most significant threats to international security today is the lack of economic and social development that is equitable for all peoples. It is clear that for much of mankind — and I use the word "mankind" as it is used in the Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies — the availability and rational use of the means for international cooperation provided by space technology are crucial in solving the problems that exist.

Meteorology, disaster prevention, the detection of natural resources — in accordance with General Assembly resolution 1803 (XVII) on the permanent sovereignty of countries over their natural resources — can be really effective only if the necessary technological means are available. These technological means will become increasingly available to the world's peoples — let us not fool ourselves — if we have a regulatory legal framework and cooperation that will not be rigid and strict and subject to inflexible frameworks, but provides us with some guidelines making it possible for us to progress in this area.

With regard to the possibility of new items, this Committee has several options which can enrich our work very much. My delegation believes that a comparison, for example, of the principles of international environmental law with those of international space law — such as the principle of

intergenerational equity, the principle of intragenerational equity, and the precautionary principle - should be very carefully studied by us. We may by that means be able to reach extremely useful and interesting conclusions. The inextricable link that exists today between the topics of the environment and the applications of space technology makes it impossible to confront environmental problems without using the means made available through space technology.

In my opinion, all those facts, which I have tried to present in as organized a fashion as possible, absolutely negate the idea that at its last session the Legal Subcommittee accomplished absolutely nothing and wasted its time. My delegation, at least, is convinced that the Subcommittee's time was used in the best possible way; we did not become distracted by other types of work during the discussions and the presentation of documents by other delegations.

Mr. Lee (Republic of Korea): I would like to make some comments under agenda item 6, from the perspectives on which my country has based its research and development of space technology and its applications.

Given the continuous progress of space technology and exploration, my delegation has noted that the need to regulate outer space activities is growing urgently in the international community in the light of the demand for a rational, equitable and effective use of space benefits. We share the view that international legal norms in this area should be based upon elements that have been found to be in the common interest of all countries.

In recognition of the various achievements of the Legal Subcommittee, my delegation believes that it is important to pursue further developments in the space regime through consensus-making efforts, as space technology is rapidly innovating and the areas of application of outer space are diversifying. Attention should be paid to the possibility that the lack of an adequate legal regime coupled with commercialism may hamper the promotion of international cooperation in the peaceful uses of outer space.

With regard to the revision of the Principles Relevant to the Use of Nuclear Power Sources in Outer Space, my delegation shares the view that the revision of the Principles should for the time being await the results of the scientific and technical study. However, one axiom to be underscored is that the use of nuclear power sources in outer space should be regulated to ensure that it is environmentally sustainable and that it will leave outer space technologically usable.

Clearly, this issue is closely related to the problem of space debris. My delegation is pleased to note that the Scientific and Technical Subcommittee adopted a multi-year work plan to address the issue of space debris. Equipped with the results and data obtained by the multi-year work plan from 1996 to 1998, the Legal Subcommittee will be able to deal with this issue more adequately.

On the question of the definition and delimitation of outer space, the questionnaire on aerospace objects finalized by the last session of the Legal Subcommittee will be helpful as a basis for further discussion. In this regard, the replies by Member States will be instrumental in providing a firm basis for further discussion. My Government will make its best efforts to prepare adequate replies and to submit them as early as possible.

As to the character and use of the geostationary orbit, it is my delegation's view that the establishment of a legal regime for that orbit is highly desirable. The geostationary orbit has specific characteristics; it is a limited natural resource, which may become saturated unless it is regulated in an orderly fashion. We hope that during a further productive exchange of views on this subject the possibility will be considered of expanding satellite slots in the geostationary orbit as technology progresses. As we said in our general statement, my delegation is of the view that the Legal Subcommittee should be fully and speedily utilized to establish the principles or legal regime on the effective use of and equitable access to the geostationary orbit, maintaining complementarity to the activities of the International Telecommunication Union (ITU).

On the subject of outer space benefits, my delegation notes that the two working papers on international cooperation in the exploration and use of outer space submitted, respectively, by the delegations of Brazil and Germany on behalf of the co-sponsors constitute an important step forward in the development of principles on this matter.

In the hope that further discussions can be finalized in a spirit of compromise so that action-oriented international cooperation in this area can be implemented as soon as possible, for the benefit and in the interests of all States, my delegation supports the adoption of the

Legal Subcommittee's report for submission to the General Assembly this year.

Mr. Telles Ribeiro (Brazil): My delegation has already set out its appraisal of the work of the Legal Subcommittee and of the progress made at its session. At this stage I should like to make some comments regarding the observations made this morning by the representative of France on certain elements of the report of the Legal Subcommittee.

Mr. Louet referred to a number of paragraphs of that report, notably paragraphs 52, 54 and 55. I would like to make some comments of my own on those paragraphs, especially because of my role as Rapporteur, and would also like to clarify some points in my capacity as representative of Brazil. In some instances, notably with reference to the general exchange of views, I will be submitting language that will, of course, reflect what has taken place here.

As representative of Brazil, I would like to note some differences with what was said here. I will adopt the order in which the representative of France referred to the paragraphs and will begin with paragraph 54, which says that at the next session of the Legal Subcommittee, in 1996, the Chairman should conduct open-ended informal consultations, with all members of the Subcommittee, with a view to identifying, on the basis of consensus, possible new agenda items. As we know, paragraph 47 mentions a number of potential items. The view of Ambassador Louet, which I share up to a point, is that the Legal Subcommittee would analyse those items and possibly choose one or two for recommendation, and the Committee itself would then have to comment on them. I agree with that. I believe that we should also bear in mind the fact that ultimately it is the General Assembly that must approve the work of the Subcommittee. COPUOS, of course, is the parent body, but as with all other United Nations committees, our decisions are subject to final approval by the General Assembly. If we follow the step-by-step procedure Mr. Louet mentioned as a starting-point — the Subcommittee, then COPUOS — we have to keep in mind that the overall umbrella is ultimately the General Assembly.

This is important because, although many Members of the General Assembly are not members of COPUOS, they should not feel excluded from participating directly or indirectly in our work. It is at least symbolically relevant that the omnibus draft resolution takes into consideration their views as well. I agree with the representative of France that COPUOS should have a say, but we have to keep in mind the overall umbrella under which we all work here.

Turning to paragraph 55, I would mention a point that the representative of France referred to only very briefly. Since in a sense he was, not really reopening parts of the report but reevaluating them, I would like to put on record the position of the Brazilian Government with regard to this paragraph. As colleagues may remember, paragraph 55 states that the burden of putting forward new items should be placed on the shoulders of the countries that actually propose them. In our statement during the general exchange of views we said that we considered this rather unfair. We went along with the text of paragraph 55 for the sake of compromise, but we are not very happy with it; I think I am at liberty to mention this since the representative of France commented on other paragraphs.

We are not very happy because we think the discussions on the possibility of new items for the agenda of the Legal Subcommittee would be much enriched if all delegations took part in them, not in the sense of rejecting any new ideas that might emerge, but in the sense of contributing substantially to ideas that some countries might put forward. Of course, Brazil could take up the challenge of trying to act as advocate for one or two such items, but it would be unrealistic to claim that Brazil alone has the information on all these items. To the contrary, the space Powers are much better equipped to defend these items, or to criticize them in a constructive way if that is their wish.

In my view, the statement that

> "It was understood that delegations that propose new agenda items for consideration should provide a brief written analysis ..." (*A/AC.105/607, para. 55*)

covers only half of the problem. I would hope that other delegations, when they become aware of the help that some delegations could provide on possible new agenda items, would feel free to join in the debate. I think we all agree that what we want here is to give substance to the work of both Subcommittees and, hence, to that of COPUOS itself.

Only in that way will we be able to address the basic concern that the representative of France brought to our attention this morning: his feeling, which I do not share, that we did very little at the last session. I respect

his right to consider that very little was done; I think that this was a perception of his delegation, and that it has to be respected as such. But if he is really convinced that very little was done — and it is his privilege to think so — one of the ways to correct the situation would be, as we have suggested in the past, to have truly constructive discussions on alternative substantive items that we could perhaps inscribe on the agenda of the Legal Subcommittee.

Next, I have a comment on paragraph 52, which addresses the question of the general exchange of views. I want to make it very clear that my roles as Rapporteur and as the representative of Brazil mix a little. Mr. Louet said that there had been a consensus in the open-ended Working Group of the Whole to the effect that the general exchange of views should be eliminated in both Subcommittees. I would respectfully note that — not as Rapporteur but as representative of Brazil — I stated quite clearly that I had some misgivings about completely eliminating the general exchange of views in both Subcommittees. First, this question of the general exchange of views is not even on the agenda; there is an asterisk indicating that we can speak if we wish. I think that this flexibility makes it interesting for us. Some delegations may wish to speak on occasion, and it should not be forbidden to say a few words.

Secondly, and most important, as I said yesterday in the Working Group, the general exchange of views is sometimes very useful. I agree, incidentally, that sometimes general statements are repetitive and perhaps even a little tiresome; Brazil may have indulged in this practice, as may other delegations. But those statements have a merit: to signal the leanings of delegations on key issues. The example I gave in the Working Group yesterday was that Brazil and, I believe, all the sponsors of the paper on space benefits gained great benefit from the information given by the German delegation, speaking on behalf of France as well, last March, when it announced on day one of the session that those two delegations had an alternative paper on the question of space benefits. As may be remembered, the question of space benefits — item 5 on the agenda of the Legal Subcommittee — was scheduled for a meeting on the fifth or sixth day of our session. Thus, everybody gained a number of days just because of that opening statement. As it was made on day one, we were able to approach delegations and exchange views with them.

The sponsors of the alternative paper were some G-77 countries. Having examined it, we decided that we could not immediately absorb all the ideas in it. However, we thought that we should adopt a constructive attitude. This attitude was reflected in many interventions that we made from day one, and it helped to create a very constructive atmosphere throughout the Legal Subcommittee's work. Rather than creating antagonism *vis-à-vis* a paper with which we essentially disagreed — and with which we essentially still disagree — we decided, on the contrary, to see how much of it we could use. This helped us a good deal.

What I am saying is that Brazil is against simply eliminating the general exchange of views in both Subcommittees, as it has some advantages. We could recommend that it be reduced to a minimum or that delegations that do not have specific points to address — points that might be useful to the Subcommittee — refrain from speaking. I could go along with that. But this is a highly subjective field, and I do not think that we should, in a sense, militarize our work and dictate measures that might ultimately affect its quality.

Finally, I have an afterthought. Those of us who have been coming here for years know that general statements also serve to warm up meetings. If they are eliminated completely — if people come here and immediately start to address agenda item 3, 4 or 5 without any sort of general statement — we shall lose the opportunity to have a warm-up on the main subjects. Many delegations are still in a learning process. That is quite natural: nobody is born with knowledge. The move to Vienna may result in many delegations' becoming familiarized with our work.

Thus, general statements do have a very didactic role to play. I can often identify in many speeches influences from different regional groups that are taken up directly in other statements. This is normal, and it is very good for our work. That is the reason for my word of caution.

The purpose of my speaking on this point is to express disagreement with the perception of the representative of France that there is consensus on the sheer elimination of the general exchange of views.

Mr. Rey Córdoba (Colombia) (*interpretation from Spanish*): I shall not speak on the various items on the Legal Subcommittee's agenda, as we had an opportunity to express our opinions on each of these during the general exchange of views. For the sake of coherence in our own position, we do not want to repeat our positions on specific items.

However, I am moved to speak once more, during this debate, by an assertion that I heard at this morning's meeting, which rather concerned me. I believe that it is relevant to give some sort of legal explanation in reply to the assertion that it is up to the Committee to set the agenda for the Legal Subcommittee. I beg to differ radically, because it is quite clear that it was General Assembly resolution 49/34 that determined precisely what items the Subcommittee was to study and decide upon — clearly, on the basis of recommendations made by the Committee. In paragraph 8 of that resolution the General Assembly clearly instructed the Committee to ensure that the Chairman of the Legal Subcommittee, at its thirty-fourth session, carried out open-ended, unofficial consultations with all the members of the Subcommittee on its working methods and agenda, including the possibility of including new items in its agenda. In other words, the resolution expressly requests the Chairman of the Legal Subcommittee to examine the possibility of modifying the Subcommittee's working methods, procedures and agenda. It is worth recalling this because it is sometimes forgotten.

Neither should we forget that this is a mandate from the General Assembly. Traditionally, the General Assembly accepts the recommendations made by the Committee on the Peaceful Uses of Outer Space, but the Assembly is sovereign when it comes to decisions on certain matters, including the mandate given to the Committee or its Subcommittees. This mechanism, it seems to us, has not been used much in our work, and it might be useful at some stage to refresh our memory on all these procedures and how matters pertaining to outer space have been dealt with by the United Nations.

The truth is that often — perhaps because our work has become routine, or perhaps because in most cases the same people are members of the Technical and Scientific Subcommittee, the Legal Subcommittee and the Committee itself — the whole thing becomes a vicious circle: sometimes we wear the Subcommittee hat, and sometimes the Committee hat, but we always think the same way. Perhaps that is why there is no progress in our work.

So perhaps it would be refreshing if at some point the General Assembly, which includes all Member States and not just the members of the Committee on the Peaceful Uses of Outer Space, were to express some opinions on the matter. It would be useful to know what that international body expects of the outer space Committee's work.

We have some experience here. If things become too complicated, we have a precedent — a case which the General Assembly resolved very wisely, in my view. I fear that if we continue with these items which are so difficult to deal with, we may have to request our colleague who chairs the Working Group of the Fourth Committee to ask that Committee to take more time to analyse this omnibus resolution. At best, it might be necessary to thrash it out — to hear about other experiences, to get other people's ideas, to let a little light and fresh air in on the matter — in order to see if that will make this type of procedure clear to everyone.

Unfortunately, I get the impression that the work of the Committee on the Peaceful Uses of Outer Space and of the Subcommittees is stagnating to a great extent, and we must find a way out. The question of working methods and procedures and whether or not new items should be included in the agenda is becoming very complicated, and it is one on which other Members of the Organization might shed some new light at the appropriate time. We must not forget that we get our mandate from the General Assembly. Let us be quite clear about that.

I think that in this way we could make progress in our debate, with a clear legal overview of what we are doing. We are not saying that the Legal Subcommittee must do what we tell it to. That is simply not the case. The Subcommittee functions as an entity, but on the basis of a mandate from the General Assembly.

The Chairman: We have concluded our consideration of agenda item 6.

Spin-off benefits of space technology: review of current status (*continued*)

Mr. Campos (Portugal): Space-based sensors are an indispensable source of data about the Earth that is essential for many purposes, such as meteorology, cartography, agriculture and oceanography, in all countries, whether developed or developing. For many applications, space-based data by itself is not sufficient, and correlation with data from other sources is needed. Furthermore, there is now a vast pool of data, which is going to increase in the coming years, as larger satellites with more sophisticated sensors come into operation. The development of methods to use all this data effectively is lagging behind the accumulation of data itself. There is a need to encourage scientific and technical work leading towards reliable and validated methods of using satellite data.

One of the obstacles to this work is the high cost of high-resolution satellite data, which may have commercial value. We do not wish to undermine the commercial viability, partial or total, of satellite projects, since this is also a contribution to progress in space technology and applications. We are aware that making the cost of satellite data dependent on the identity of the buyer — for example, a university or a commercial company — or its declared use — research or services — may not be practical because of the possibility of transfer.

We would like to propose another solution: making available at no cost for scientific research purposes high-resolution data on areas of low commercial interest. In this way, scientific research would be made possible on methods of effective use of satellite data, thereby achieving greater spin-off from the investment made on Earth-observation satellites.

The Chairman: I now call on the representative of the Committee on Space Research (COSPAR).

Mr. Szegö (Committee on Space Research (COSPAR)): The Committee on Space Research (COSPAR) is most pleased to be able to address the United Nations Committee on the Peaceful Uses of Outer Space at its thirty-eighth session, because matters related to space research and applications are very much at the fore of public discussion in most of the countries engaged in these activities. In contrast to the situation prevailing in past decades, present deliberations seem, in a number of countries, to revolve not so much around questions of how to expand the space sector but, rather, how to preserve accumulated scientific and industrial potential. The theme of continuity — of defending the place of space programmes within the framework of national economic efforts and international cooperation — is often the most visible subject of discourse, both nationally and internationally.

What are the salient features when one looks at the panoply of international efforts to continue the exploration of space? The prevailing impression is that in all countries the budget to carry out space exploration is shrinking. It is more and more difficult to start new space missions, to maintain the operation of successful current missions, to work out new technologies and to keep knowledgeable space-research staff.

Big space missions are under very serious pressure and scrutiny. This impression, among others, arises from the efforts to reorganize the United States National Aeronautics and Space Administration (NASA) and to achieve significant savings in the budget of the European Space Agency (ESA). In particular, the high cost of the space station has prompted the initiative not only to internationalize its realization, but also to cut down significantly on the ambitiousness of its final design. In addition, intensive discussions have begun on the best ways of distributing the dwindling funds between competing space-research projects.

The natural answer to the queries and doubts of the community of scientists and engineers involved in space research is to look for novel ways to achieve excellence in research at a moderate cost. The uncertainties surrounding very big projects have encouraged a strong movement towards the development of small space missions. These undertakings are conceived and proposed not only for the exploration of near-Earth space but also to continue the investigation of the outer solar system.

The move away from a few very large and expensive space endeavours to a good number of small projects — still expected to provide first-rate scientific results, with the total combined cost representing only a fraction of the previously envisaged expenditures — was made possible by the rapid growth of technological capabilities. This new and unconventional approach permits advances at much lower cost and also allows the flexibility necessary to meet shifts in financial policies. This last aspect may be of particular value to scientific groups that are endowed with less money, especially to those from nations which have decided only recently to take part in international space programmes and whose scientific priorities preclude tying up large sums of money in projects with uncertain prospects and ill-defined time scales.

It would, however, be unfair to create the impression that because of various difficulties space research is in a winding-down phase. Despite the aforementioned problems, international and national space agencies are engaged in work on a number of exciting projects to be realized in the near and the more distant future. Even such an ambitious undertaking as the return of man to the moon is at present a topic of discussion among the agencies. One of the reasons for such discussion is the now well-rooted conviction, based on the decades-long experience of many nations, that space activities are driving the development of industrial know-how and industrial infrastructure. COSPAR notes with satisfaction that application programmes, such as remote

sensing, weather forecasting and telecommunication, have become an inseparable part of everyday life.

This last aspect can be especially important for countries which have embarked only recently on fast-development programmes of space-oriented activities. It is therefore with great hope and expectations that many groups of scientists involved in space undertakings observe the recent trends among several nations of the South, as well as of South-East Asia and the Pacific rim, to promote vigorously space-research and application programmes. The COSPAR community has followed with keen interest discussions at the Asia-Pacific Workshops on Multilateral Cooperation in Space Technology and Applications and very much welcomes the decision taken recently to prepare a comprehensive document laying the foundation of a regional space mechanism.

Promotion, through international cooperation, of space research and related applications constitutes the very core of COSPAR policies. Indeed, one of the important aims of COSPAR Scientific Assemblies and Colloquiums is to offer proper discussion forums for scientists of all nations and thus to help find adequate answers to questions pertaining to international cooperation in space research. As illustrated by the programme of COSPAR's last Scientific Assembly, held in July 1994 at Hamburg, Germany — an event attended by more than 1,500 participants from all over the world — the COSPAR scientific and engineering community is participating fully in the discussion of the difficulties, challenges and opportunities that have been identified in the realm of space research. We hope that our deliberations may contribute to a better definition of objectives in the field of space research and to applying findings more usefully to present-day economic realities. We note in this respect the growing importance of providing space weather forecasting for application-oriented satellites. We also hope that our system of Colloquiums — smaller meetings organized often on a regional basis — can be instrumental in establishing proper scientific criteria and aims for research and application in areas important for any given group of nations.

In this connection, it may be of interest to participants in the present COPUOS session that, besides many international scientific unions, the COSPAR family includes 38 member nations, with several other countries currently discussing the possibility of joining. Recently our organization adopted a new charter and bylaws expressing the realities of post-cold-war developments. Under this new constitution, all members of COSPAR have an equal opportunity to hold any office within the organization. Associate status, a new category of affiliation created less than three years ago for individual scientists, already numbers approximately 4,000 adherents. I should like to stress in particular that the individual scientists and engineers who constitute the body of our Associates come from 88 different countries, and thus may be considered to be a truly representative group for space research activities world wide. Associates are organized in seven Scientific Commissions encompassing a very wide spectrum of fields. COSPAR remains ready, as in the past, to put its pool of knowledge and expertise at the disposal of the international community.

Before I close, let me say how much COSPAR appreciates the opportunity, in close cooperation with the International Astronautical Federation (IAF), to present to the international community the views of relevant scientific, engineering and industrial groups on aspects of space science and technology that are directly related to the practical needs of countries. I am referring to COSPAR's participation in the long series of symposiums organized along with the IAF, which are held on the occasion of the annual session of the Scientific and Technical Subcommittee of COPUOS. We feel that in order to foster the best use of existing technologies no effort should be spared in encouraging better understanding between space scientists, technical experts and representatives of the lay public; the well-being of the latter should be the ultimate goal of activities carried out in the name of the peaceful use of outer space.

I hope the deliberations of the Committee on the Peaceful Uses of Outer Space at this session will be most fruitful.

The Chairman: The Committee has concluded its consideration of agenda item 8 — although I note that the delegation of India intends at a later stage to make a technical presentation on this subject.

Other matters

The Chairman: I wish to draw the Committee's attention to outstanding requests from two non-governmental organizations, the International Academy of Astronautics and the International Astronomical Union, for observer status with the Committee. The relevant correspondence and statutes relating to these two organizations were circulated at the thirty-second session of the Scientific and Technical Subcommittee for the information of States members of the Committee. Before asking whether the Committee wishes to grant observer

status to these two non-governmental organizations, I shall call on the representative of the Czech Republic, who wishes to speak on this matter.

Mr. Perek (Czech Republic): We support the application of the International Astronomical Union (IAU) for observer status with this Committee. There are several reasons for our support. The agenda of the Scientific and Technical Subcommittee includes items entitled "Matters relating to planetary exploration" and "Matters relating to astronomy". This fact alone would be sufficient reason to grant the IAU observer status. The IAU is a non-governmental organization of professional astronomers. In the course of the 76 years of its existence it has become the forum where most international cooperation in astronomy is carried out. The Union has 7,800 individual members — more than the number of pieces of space debris — residing in over 60 countries. It is worthwhile noting that the IAU is responsible for assigning names to surface features on the planets and designations to comets and asteroids.

At the last session of the Scientific and Technical Subcommittee we had the privilege of hearing a technical presentation by Professor Derek McNally, former General Secretary of the IAU, on "Adverse environmental impacts on astronomy", which reported on a Conference, sponsored by the United Nations Educational, Scientific and Cultural Organization (UNESCO), the Council of Scientific Unions, the IAU and the Committee on Space Research (COSPAR), dealing with the impact of civilization on astronomy, with electromagnetic pollution at optical and radio wavelengths and with effects of space debris — the last directly related to another item on the Subcommittee's agenda.

The development of space activities is closely linked with the results of observations and theoretical investigations that had been conducted in astronomy for a long time before the first artificial satellite could be launched. At that time, astronomical methods for determining orbits had already been developed and we had basic knowledge of large and small bodies of the solar system. It was also well understood what could be discovered from the ground and what had to wait for observations from space. Without the astronomy of the nineteenth century there would have been no space activities of the twentieth. In the future, astronomical research will always have to be a few steps ahead. This may concern, for instance, knowledge of small asteroids crossing the orbit of the Earth.

This Committee can help astronomy achieve its difficult task by helping to protect and maintain decent observing conditions for ground-based observatories as well as by promoting space research. I trust that the observer status of the IAU will result in fruitful cooperation.

We also support the application of the International Academy of Astronautics (IAA) for observer status. The IAA is a non-governmental organization that awards membership to individuals for their contributions to astronautics. The IAA is well known in this Committee, not only from the blue rosettes with the Big Dipper in the buttonholes of several participants, but also, and mainly, from its contribution to our work. One of the outstanding recent examples was the IAA position paper on orbital debris, which contains a brief but authoritative overview of scientific and technical aspects of that complex phenomenon. Formal observer status would confirm the informal links that have existed between the IAA and this Committee for a long time.

The Chairman: May I take it that the Committee wishes to grant permanent observer status with the Committee to the International Astronomical Union and the International Academy of Astronautics? This is in accordance with the agreement of the Committee at its thirty-third session concerning observer status for non-governmental organizations, as outlined in paragraph 137 of document A/45/20, which stipulates that these organizations will also apply for consultative status with the Economic and Social Council.

It was so decided.

The Chairman: I shall now call on the remaining speakers on agenda item 9.

Mr. Flügger (Germany): Allow me at this time to take the opportunity to remind colleagues of the German candidate for the chairmanship of the Scientific and Technical Subcommittee, Professor Dietrich Rex. We think he is an excellent candidate not only because he possesses expertise in a vast range of space matters but also because of his 15 years of experience as a representative in the Committee on the Peaceful Uses of Outer Space and its Scientific and Technical Subcommittee. From informal talks we have had with a large number of delegations, we understand that a consensus on the German candidate has emerged. We are looking forward to the elections to be held at the next session of the Scientific and Technical Subcommittee.

Mr. Campos (Portugal): Mr. Chairman, in your closing remarks at yesterday's meeting you urged new members of the Committee not to pass severe judgements without the benefit of further experience in the Committee's work and a more thorough knowledge of its past achievements. We note that modern society is growing ever less likely to be content with successes of the past. We are asked more often to justify the resources we consume in current activities in terms of their likely future benefits.

The new members of the Committee do not have the benefit of past direct experience here, but they may have had such experience in other relevant forums. The new members may play a useful role in the renewal of the Committee since their views are not shaded by accommodation to past practices and habits. They represent the closest to an independent outside view of the workings of the Committee, which we are trying to improve.

We have made significant progress on this subject. Let me single out the decision to move from verbatim records to transcriptions. The latter are perfectly adequate, and are perhaps even preferable to the former, and will represent a savings of about $250,000. Such economies can affect the contributions of Member States to the United Nations or allow the United Nations to ease its financial constraints elsewhere. Concerning the Legal Subcommittee, we fully agree that it is important to allow for the reintroduction of summary records in case of the preparation of a new treaty or a similar activity. We should emphasize to the General Assembly that our voluntary adoption of transcriptions is an important saving, the acceptance of which implies that the exception I have just mentioned — preparation of a treaty by the Legal Subcommittee — would be viewed favourably in the future. It has been decided not to extend the use of transcriptions to the Legal Subcommittee immediately, but instead to seek the Subcommittee's opinion. We note that the Committee has the final word, and we hope that the Legal Subcommittee will follow our example in achieving significant economies.

The main thrust of my statement is another matter of the greatest importance, on which we have unfortunately not achieved much progress: the duration of our sessions. We would like to propose another approach to this matter, which would not restrict agenda items or put any new limit on the opportunities for member States to make statements, but which could still reduce the number of days spent on our proceedings. A normal working day is universally considered to be six to eight working hours. However, if we take the total number of working hours of our Committee and its Subcommittees and divide by six to eight hours, we arrive at a figure of less than two or three weeks. Meetings are scheduled for six hours per day, but this may not be achieved if members do not wish to speak on the items on the agenda for a given day. We should be able to proceed to the next agenda item, thereby achieving, consistently, a six- to eight-hour working day through this change in our working rules.

We note that the number of working days is the most important measure of the resources consumed by the Committee and its Subcommittees, since this relates to at least three aspects: the cost to the United Nations, which is determined by the number of days its facilities and services are used; the cost to member States, which is determined by the number of days allocated by representatives and experts; and the duration of our session, which determines how long those of us to have to travel to these sessions spend away from their home and their other work.

A reduction in the number of days taken up by our proceedings would ease scheduling of activities in Vienna and would limit the increase in the pile of work that accumulates in our home countries during our absence, awaiting our return. The availability of skilled and knowledgeable individuals is perhaps the most scarce of resources. By making our sessions last fewer days we may be able to enlist broader participation and increase the quality of our work.

In conclusion, we reiterate our proposal that we review our methods of work as necessary, to achieve consistently a six- to eight-hour working day. This measure would not limit the scope or depth of our work, but would provide greater efficiency by achieving the same output with a lesser consumption of resources.

Mr. de Souza Marcos de la Penha (Brazil): The Brazilian delegation would like to say a few words regarding the Brazilian space programme, under the agenda item "Other matters".

The considerable resources invested by Brazil in the space sector over the last 30 years has allowed my country to develop a cadre of competent specialists, to consolidate national research and development institutes, to establish important infrastructure facilities, and to begin the development of the Brazilian space industry.

These investments also enhanced the dissemination of techniques for satellite communications, navigation, remote sensing, environment monitoring and meteorology, which can play an important role in the solution of many national problems.

The year 1994 witnessed major breakthroughs, which have rewarded this long-standing commitment to scientific and technological development in the space field. In these areas, I should like to highlight the following achievements and the major projects to be completed in the near future, in the context of the Brazilian space programme.

First, there was the launch, in February 1993, of the first satellite developed in Brazil — the data-collecting satellite called SCD-1 — into an orbit at an altitude of 760 kilometres. Assuming the absence of unforeseen exogenous factors, the SCD-1 is expected to remain operational through March 1996, making a total useful life of three years, against the one year previously assumed.

Then there will be the launch of a second data-collecting satellite — the SCD-2 — in the first trimester of 1996, by a foreign satellite-launch vehicle to be selected through international bidding scheduled to take place later this year.

Thirdly, there is the completion of the Brazilian satellite-launch vehicle project — the VLS-1 — which was recently tested most successfully. The VLS-1 is scheduled to be launched during the second semester of 1996, carrying an SCD-2, from the Alcantara Launch Centre.

Fourthly, we have the establishment of the Alcantara Launch Centre. Located 2 degrees south of the equator, on the South Atlantic edge of the Amazon region, the Centre is uniquely positioned to bring about savings of over 30 per cent for launches into equatorial orbits. Its operational capabilities were thoroughly tested in 1994, with the launching of more than 30 sounding rockets by the United States National Aeronautics and Space Administration (NASA) and the Brazilian National Institute of Space Research — the so-called Guará Campaign. The Centre will be available, on a commercial basis, to both domestic and foreign space institutions by late 1996.

Fifthly, there is the implementation of the Brazil-China Earth Resources Satellite Project — the CBERS project. This international joint venture in the space sector — the first-ever between two developing countries — pools the financial and skilled-manpower resources of the two States to establish a complete remote sensing system that will be competitive on the international market in the late 1990s.

In carrying on its space activities, Brazil can rely upon a solid infrastructure provided by the Satellite Integration and Test Laboratory, which recently tested the Argentine satellite, and the Satellite Tracking Control Centre, both of which come under the National Institute for Space Research.

In the administrative and planning fields, the year 1994 also brought about an important breakthrough — namely, the establishment of the Brazilian Space Agency, in February 1994, as a civilian authority within the purview of the Executive Office of the President of Brazil.

The Brazilian Space Agency is called upon to foster cooperation between industry and academia, as well as to coordinate the major elements of Brazil's space activities, which are currently carried out by the Ministry of Science and Technology, through the National Institute for Space Research, and the Ministry of Aeronautics, through the Aerospace Technical Centre.

A first assignment of the Brazilian Space Agency was the updating of the national policy on the development of space activities, approved by the President of Brazil last December. The new national policy includes a chronogram of activities for the next 10 years, in keeping with the well-tried model of development through long-term commitments. International cooperation continues to enjoy priority status in the new national policy.

In this vein, I should like to single out three examples.

The first is a cooperative regional project managed by the Ministry of Science and Technology, which will share the data-collection services provided by SAD-1, and in future by SAD-2, with South American countries, on a concessional basis.

Secondly, there is the selection of Brazil, by its hemispheric partners, to host the directorate of the recently created Interamerican Institute for Global Change Research at the headquarters of the Brazilian National Institute for Space Research.

Thirdly, there is the extensive refurbishing work on the facilities assigned for the United Nations Regional

Centre, to be located at the National Institute for Space Research, in the vicinity of the Aerospace Technical Center, in São José dos Campos, São Paulo.

The Brazilian delegation believes that this information will be of interest to the Committee.

The Chairman: It appears that there are no further speakers on agenda item 9.

Immediately after the adjournment of this meeting there will be further consultations between interested delegations on the question of a third United Nations Conference on the Exploration and Peaceful Uses of Outer Space.

Mr. Zlauvinen (Argentina) (*interpretation from Spanish*): I seek clarification, Mr. Chairman.

You have just announced that following this meeting there will be informal consultations on the subject of a third United Nations Conference on the Exploration and Peaceful Uses of Outer Space. I should like to know whether in the course of those consultations we shall have interpreters. My delegation's understanding is that the interpreters will be available until the end of the afternoon meeting.

The Scientific and Technical Subcommittee had simultaneous interpretation for its informal consultations on this item, but unfortunately our consultations this morning had to be held without interpretation — as a result, I believe, of a last-minute coordination problem.

The Chairman: I cannot answer this question immediately. We shall have to check with the secretariat.

Mr. Webb (Canada): I have another question, just for clarification: will the topic of a third United Nations Conference on the Exploration and Peaceful Uses of Outer Space come up formally under agenda item 9, "Other matters"?

The Chairman: Yes. I announced that yesterday morning.

I am waiting for information from the secretariat regarding interpretation facilities, which I will give the Committee in short order.

Mr. Rey Córdoba (Colombia) (*interpretation from Spanish*): According to what I heard the representative of Argentina say, this morning there were informal consultations on this subject. I wish to state that my delegation was not aware of those informal consultations, and we would have liked to participate in them. I would like to ask whoever is coordinating those informal consultations please to advise all delegations so that we can participate. I was as surprised as anyone to hear this news just now from the representative of Argentina.

The Chairman: I would like to draw the attention of my dear friend Alfredo Rey Córdoba from Colombia to the fact that I announced this morning that there would be informal consultations between interested delegations, coordinated by the Rapporteur and by Mr. Tremayne-Smith. The representative of Colombia may not have been in the room at the time. I apologize, but I announced it here, publicly, in this morning's meeting. I reiterate that there will be a continuation of these informal consultations, coordinated by Mr. Edgard Telles Ribeiro, together with our colleague from the United Kingdom.

At this stage I am just waiting for some technical information. Perhaps we can comply with the request of our colleague from Argentina, and possibly others, that we have interpretation facilities.

Mr. González (Chile) (*interpretation from Spanish*): As my delegation sees it, this meeting that we are in right now was budgeted to go on until 6 p.m. If we finish early, then we can assume that we will still have interpretation facilities for the time remaining.

It seems to us that we will be at a genuine disadvantage if we have to carry on without interpretation. If that were the case, I would dare to suggest that we hold the meeting in Spanish, which is one of the official languages of the United Nations. Why not?

The Chairman (*interpretation from Spanish*): I have no objection whatsoever to speaking Spanish, which is an estimable language.

At this time I am simply waiting for some technical information. I would ask the Committee to have a little patience. I shall inform members as soon as I receive that information.

(*spoke in English*)

I have the answer and can now give the Committee the information requested. The intention was to hold the

consultations in a smaller room, in order to maintain a certain informality, but as no other room is available, in accordance with the request they will be held here, immediately after the adjournment of this meeting, with full interpretation facilities and coordinated by the Rapporteur, with the assistance of the representative of the United Kingdom.

The meeting rose at 4.45 p.m.